39-AA-0004

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 94-258

WASTE DISCHARGE REQUIREMENTS
FOR
COUNTY OF SAN JOAQUIN AND FOOTHILL SANITARY LANDFILL, INC.
FOOTHILL SANITARY LANDFILL
CLASS III LANDFILL
SAN JOAQUIN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board), finds that:

1. The San Joaquin County Department of Public Works owns and Foothill Sanitary Landfill, Inc. operates the Foothill Sanitary Landfill. The owner and operator are hereafter referred to as Discharger. The facility was previously regulated by Waste Discharge Requirements (WDR) Order No. 91-020 in conformance with Title 23, California Code of Regulations (CCR), Division 3, Chapter 15 (hereafter Chapter 15). Order No. 91-020 was amended 17 September 1993 by Order No. 93-200 implementing State Water Resources Control Board Resolution No. 93-62 and federal municipal solid waste regulations. The Discharger proposed an Article 5 monitoring program on 24 June 1992 and submitted a Water Quality Protection Standard Report on 29 December 1993. These waste discharge requirements combine information from Order No. 91-020, amendments made by Order 93-200, the Article 5 monitoring proposals, and the Water Quality Protection Standard Report.

2. Foothill Sanitary Landfill is an 800-acre facility. The facility is 1 mile south of Shelton Road, on the east side of Waverly Road in San Joaquin County, in Section 12 and 13, T2N, R9E, MDB&M, as shown in Attachment A, which is incorporated herein and made part of this Order.

3. Waste disposal activities have occurred within LF-1. To date approximately 80 acres have been filled and LF-1 is estimated to reach capacity in 1999. LF-2 will be developed into 29 distinct but continuous modules, as shown in Attachment B which is incorporated herein and made part of this Order. The first lined module is currently being excavated, and the soil is being used for daily and intermediate cover on the existing landfill area. When the lined module is being filled, the next module will be excavated, and the soil will be used for daily and final cover. This sequence will continue until the entire site is filled. The estimated site life for Foothill Sanitary Landfill is approximately 56 years, or the year 2050.

WASTES AND THEIR CLASSIFICATION

4. The Discharger proposes to continue to discharge municipal solid waste for disposal in the Class III landfill. These wastes are classified as "non hazardous solid waste" or "inert waste" using the criteria set forth in Chapter 15. The discharge rate is approximately 700 tons per day.

SITE DESCRIPTION

5. Land within 1000 feet of the facility is used for agriculture.

6. There are several faults in the area, but the Bear Mountain Fault Zone, at a distance of about 12 miles from the site, would most likely be the source of the maximum probable earthquake of 5.7 on the Richter scale. This could produce an estimated peak bedrock acceleration, at the site, of 0.15g.

7. The first water bearing formation is about 150 feet below the base of the landfill. The hydraulic gradient is generally to the south/southwest.

8. The beneficial uses of ground water are domestic, municipal, agricultural, and industrial supply.

9. The facility receives an average of 17.5 inches of precipitation per year as determined from an isohyetal map of San Joaquin County developed from "Storm Drainage Study and Master Plan, San Joaquin County, January 1973". The mean evaporation for this facility is 78 inches per year as determined by the California Department of Water Resources for the station at the Oakdale Woodward Dam.

10. The 100-year, 24-hour precipitation event for the facility is 3.9 inches, based on data published by the California Department of Water Resources.

11. The facility is not within a 100-year flood plain.

12. Surface drainage is intermittent in nature, with storm waters draining generally in a westerly direction to enter the Delta via either Mormon Slough or Duck Creek.

13. The beneficial uses of these surface waters are domestic, municipal, agricultural, and industrial supply; ground water recharge; recreation; stock watering; aesthetic

enjoyment; fresh water replenishment and habitat; spawning; wildlife habitat; and the preservation and enhancement of fish, wildlife and other aquatic resources.

FACILITIES OPERATION

14. A Hazardous Waste Exclusion Program has been implemented at the Lovelace Road Transfer Station. The program consists of checking loads going through the station, which make up 93 percent of wastes disposed of at Foothill, and turning away any prohibited wastes. If prohibited wastes do get through, there are provisions for removal of the wastes from the landfill. Foothill Sanitary Landfill site personnel are trained to check for prohibited wastes as they are unloaded.

15. The Discharger's current plans indicate that the Class III landfill will reach capacity in about 56 years or by the year 2050. The total capacity of this landfill is 102 million cubic yards which consists of refuse and daily cover soil. Refuse capacity is about 77 million cubic yards.

16. The Discharger has installed three ground water monitoring wells (MW-1, MW-2, and LW-1). These wells are used to monitor ground water with respect to Module 1. More groundwater monitoring wells will be installed as operations proceed to other modules.

WASTE MANAGEMENT UNIT DESIGN

Landfill

17. That part of LF-1 covered with waste prior to 9 October 1993 does not have a liner. The Discharger proposes to line any footprint expansion after 9 October 1993 with a composite clay and 60 mil high density polyethylene (HDPE) liner, overlain by a leachate collection and removal system (LCRS).

Certification

18. Mr. Gabriel E. Karam, a registered civil engineer, certified that the portion of LF-1 constructed prior to 9 October 1993 meets the construction or prescriptive standards and performance goals of Chapter 15.

CEQA AND OTHER CONSIDERATIONS

19. The action to update the WDRs for this facility is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 2100, et seq), in accordance with Title 14, CCR, Section 15301.

20. This order implements:

    a. The Water Quality Control Plan for the Sacramento-San Joaquin Delta (5B), Second Edition;
    b. The prescriptive standards and performance goals of Chapter 15, Division 3, Title 23 of the California Code of Regulations, effective 27 November 1984, and subsequent revisions;
    c. The prescriptive standards and performance criteria of Part 258, Title 40 of the Code of Federal Regulations, Subtitle D of the Resource Conservation and Recovery Act; and
    d. State Water Resources Control Board Resolution No. 93-62, Policy for Regulation of Discharges of Municipal Solid Waste, adopted 17 June 1993.

21. On 9 October 1991, the United States Environmental Protection Agency (EPA) promulgated regulations (Title 40, Code of Federal Regulations, Parts 257 and 258, "federal MSW regulations" or "Subtitle D") that apply, in California, to dischargers who own or operate landfill units at which municipal solid waste (MSWLF) is discharged. The majority of the federal MSW regulations became effective on the "Federal Deadline", 9 October 1993.

PROCEDURAL REQUIREMENTS

22. All local agencies with jurisdiction to regulate land use, solid waste disposal, air pollution, and to protect public health have approved the use of this site for the discharges of waste to land stated herein.

23. The Board has notified the Discharger and interested agencies and persons of its intention to revise the WDRs for this facility.

24. In a public hearing, the Board heard and considered all comments pertaining to this facility and discharge.

IT IS HEREBY ORDERED that Order No. 91-020 is rescinded and Attachment I of Order 93-200 is amended to delete San Joaquin County (for the Foothill Sanitary Landfill), and it is further ordered that San Joaquin County and its agents, assigns and successors, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of 'hazardous waste' or 'designated waste' at this site is prohibited. For the purposes of this Order, 'hazardous waste' and 'designated waste' are as defined in Chapter 15 and described in Monitoring and Reporting Program No. 94-258.

2. Discharges of waste to either a landfill unit that has not received wastes or to a lateral expansion of a landfill unit are prohibited, unless the discharge is to an area equipped with a containment system which meets requirements in **B. Specifications**, below.

3. The discharge to landfill modules of liquid or semi-solid waste (i.e., waste containing less than 50 percent solids), except dewatered sewage or water treatment sludge as provided in Section 2523(c) of Chapter 15, is prohibited.

4. The discharge to the landfill unit of solid waste containing free liquid or moisture in excess of the waste's moisture holding capacity is prohibited.

5. The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or ground water is prohibited.

6. The discharge of containerized liquids at this facility is prohibited.

7. The discharge of waste to ponded water from any source is prohibited.

8. The discharge of waste within 50 feet of surface waters not related to landfill drainage structures is prohibited.

9. The discharge of wastes which have the potential to reduce or impair the integrity of containment structures or which, if commingled with other wastes

in the unit, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products which in turn:

a. require a higher level of containment than provided by the landfill,
b. are "restricted hazardous wastes", or
c. impair the integrity of containment structures

is prohibited.

B. DISCHARGE SPECIFICATIONS

General Specifications

1. Wastes shall only be discharged into, and shall be confined to, the landfill modules specifically designed for their containment.

2. All wells within 500 feet of the module shall be sealed or abandoned to the satisfaction of the San Joaquin County Public Health Services Department prior to discharge of waste to the unit. A record of the sealing and/or abandonment of such wells shall be sent to the Board and to the State Department of Water Resources.

3. Leachate generation by a landfill unit leachate collection and removal system (LCRS) shall not exceed 85% of the design capacity of the sump pump. If leachate generation exceeds this value or if the depth of fluid in an LCRS exceeds the minimum needed for pump operations, then the Discharger shall immediately cease the discharge of sludges and other high-moisture wastes to the landfill module and shall notify the Board in writing within seven days. Notification shall include a time table for remedial or corrective action necessary to reduce leachate production.

General Waste Management Unit Construction

4. Design of waste management units shall include a Construction Quality Assurance Plan, which shall:

a. be submitted for review and approval by the Board staff prior to construction;

b. demonstrate that the waste management unit has been constructed according to the specifications and plans as approved by the Board staff; and

c. provide quality control on the materials and construction practices used to construct the waste management unit and prevent the use of inferior products and/or materials which do not meet the approved design plans or specifications.

5. Clay liners and landfill caps shall have a maximum hydraulic conductivity of 1×10^{-7} cm/sec and a minimum relative compaction of 90%. Engineered alternatives shall be approved by the Board. Hydraulic conductivities of liner materials shall be determined by laboratory tests using solutions with similar properties as the fluids that will be contained. Hydraulic conductivities of cap materials shall be determined by laboratory tests using water. Hydraulic conductivities determined through laboratory methods shall be confirmed by field testing in accordance with the Standard Provisions and Reporting Requirements as described in Provision D.1.

6. LCRSs shall be designed, constructed and maintained to collect twice the anticipated daily volume of leachate generated by the landfill and to prevent the buildup of hydraulic head on the underlying natural geologic materials of low hydraulic conductivity. The depth of fluid in any LCRS sump shall be kept at or below the minimum needed to ensure efficient pump operation.

Landfill Specifications

7. Municipal solid waste shall be discharged to either (a) that portion of a module which received wastes (i.e. that active portion of the module which is within the boundaries of the Existing Footprint), or (b) to an area equipped with a containment system which meets the additional requirements for both liners and leachate collection systems specified below.

8. All containment systems installed after 9 October 1993 shall either: (a) include a composite liner which consists of an upper synthetic flexible membrane component (synthetic liner or SL) and a lower component of soil. The SL shall be at least 40-mils thick (or at least 60-mils thick if high density polyethylene) and shall be installed in direct and uniform contact with the underlying compacted soil component. The lower component shall be compacted soil that is at least two feet thick and that has an hydraulic

conductivity of no more than 1 x 10^{-7} cm/sec (this specification is referred to as the Prescriptive Design); or (b) an engineered alternative approved by the Board.

9. All containment systems installed prior to 9 October 1993 where wastes have not been discharged and which will accept wastes after 9 October 1993 shall include a composite liner which features as its uppermost component a synthetic liner (SL). The SL shall be at least 40-mils thick (or at least 60-mils thick if high density polyethylene) and shall be installed indirect and uniform contact with the underlying materials. The composite liner shall meet the performance criteria contained in 40 CFR 258.40(a)(1) and (c).

10. New landfill units and lateral expansions shall not be located in wetlands unless the Discharger has successfully completed, and the Board has approved, all demonstrations required for such discharge under 40 CFR 258.12(a).

11. Landfill leachate shall be disposed by a Board-approved method.

Protection from Storm Events

12. Precipitation and drainage control systems shall be designed, constructed, and maintained to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 100-year, 24-hour precipitation conditions.

13. Modules shall be designed, constructed, and operated in compliance with precipitation and flood conditions contained in the Standard Provisions and Reporting Requirements referenced in Provision D.1 below.

14. Annually, prior to the anticipated rainy season, any necessary erosion control measures shall be implemented, and any necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the site and to prevent surface drainage from contacting or percolating through wastes.

Landfill Closure Specifications

15. At closure, the unlined landfill modules shall receive a final cover which is designed and constructed to function with minimum maintenance and consists, at a minimum, of a two-foot thick foundation layer which may contain waste

materials, overlain by a one-foot thick clay liner, and finally by a one-foot thick vegetative soil layer, or an engineered equivalent final cover approved by the Board pursuant to Subsections 2510(b) and (c) of Chapter 15. Lined landfill modules, or portions thereof, shall be covered with a barrier layer having a permeability of at least as low as the liner.

16. Vegetation shall be planted and maintained over each closed landfill module. Vegetation shall be selected to require a minimum of irrigation and maintenance and shall have a rooting depth not in excess of the vegetative layer thickness.

17. Closed landfill modules shall be graded to at least a three-percent (3%) grade and maintained to prevent ponding.

C. RECEIVING WATER LIMITATIONS

Water Quality Protection Standards

The concentrations of Constituents of Concern in waters passing through the Points of Compliance shall not exceed the Concentration Limits established pursuant to Monitoring and Reporting Program No. 94-258, which is attached to and made part of this Order.

D. PROVISIONS

1. The Discharger shall comply with the Standard Provisions and Reporting Requirements, dated September 1993, which are hereby incorporated into this Order. The Standard Provisions and Reporting Requirements contain important provisions and requirements with which the Discharger must comply. A violation of any of the Standard Provisions and Reporting Requirements is a violation of these waste discharge requirements.

2. The Discharger shall comply with all applicable provisions of 23 CCR Chapter 15 and 40 CFR Part 258 that are not specifically referred to in this Order.

3. The Discharger shall comply with Monitoring and Reporting Program No. 94-258, which is attached to and made part of this Order. This compliance includes, but is not limited to, maintenance of waste containment facilities and precipitation and drainage controls and monitoring ground water, leachate from

the landfill units, the vadose zone and surface waters, throughout the active life of the waste management units and the post-closure maintenance period. A violation of Monitoring and Reporting Program No. 94-258 is a violation of these waste discharge requirements.

4. The Discharger shall maintain legible records of the volume and type of each waste discharged to each module and the manner and location of discharge. Such records shall be maintained at the facility until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Board and of the State Water Resources Control Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Regional Board.

5. The Discharger shall provide proof to the Board **within sixty days after completing the final closure** that the deed to the landfill facility property, or some other instrumentation that is normally examined during title search, has been modified to include, in perpetuity, a notation to any potential purchaser of the property stating that:

   a. the parcel has been used as a municipal solid waste landfill (MSWLF);
   b. Land use options for the parcel are restricted in accordance with the post-closure land uses set forth in the post-closure plan and in WDRs for the landfill; and
   c. In the event that the Discharger defaults on carrying out either the post-closure maintenance plan or any corrective action needed to address a release, then the responsibility for carrying out such work falls to the property owner.

6. The post-closure maintenance period shall continue until the Board determines that remaining wastes in the landfill will not threaten water quality.

7. The Board will review this order periodically and may revise requirements when necessary.

8. The owner of the waste management facility shall have the continuing responsibility to assure protection of usable waters from discharged wastes and from gases and leachate generated by discharged waste during the active life,

closure, and post-closure maintenance period of the landfill and during subsequent use of the property for other purposes.

E. REPORTING REQUIREMENTS

1. The Discharger shall comply with the reporting requirements specified in this Order, in Monitoring and Reporting Program Order No. 94-258, and in the Standard Provisions and Reporting Requirements which are attached hereto and made part of this Order.

2. The Discharger shall submit a closure and post-closure maintenance plan (or submit suitable modifications to a pre-existing plan), that complies with 40 CFR 258.60 and 258.61, with Article 8 of Chapter 15 and with Title 14 of the CCR.

3. The Discharger shall notify the Board in writing of any proposed change in ownership or responsibility for construction or operation of the landfill units. The Discharger shall also notify the Board of a material change in the character, location or volume of the waste discharge and of any proposed expansions or closure plans. This notification shall be given 90 days prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these WDRs.

4. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator in writing of the existence of this Order. A copy of that notification shall be sent to the Board.

5. The Discharger shall submit a status report regarding the financial assurances for corrective action and closure every five years after the date of adoption of these requirements that either validates the ongoing viability of the financial instrument or proposes and substantiates any needed changes.

6. The Discharger shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions which could impair the integrity of waste or leachate containment facilities or of precipitation and drainage control structures.

7. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Department of Water Resources with regard to the construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with Monitoring and Reporting Program No. 94-258, as required by Section 13750 through 13755 of the California Water Code.

8. The method used to close each module at the facility and maintain protection of the quality of surface and ground waters shall comply with waste discharge requirements established by the Board.

I, WILLIAM H. CROOKS, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Region Water Quality Control Board, Central Valley Region, on 16 September 1994.

William H. Crooks

WILLIAM H. CROOKS, Executive Officer

Attachments
SER/EAS:sjs